

CA

Preparation of hydrogen by conversion of hydrocarbons with water vapor. I. V. Rakovskii, O. A. Burnova and M. I. Rakovskii. *Khim. Promst.* 8, 317-63 (1957). A mixt. contg. CH<sub>4</sub> 26.6, C<sub>2</sub>H<sub>6</sub> 63.2 and CO<sub>2</sub> 0.2% was allowed to pass with water vapor through a heated reaction tube filled with a catalyst. The optimal conversion temp. was 650°C, at which both components of the mixts. were completely converted, yielding gas contg. CO 0.8-3.8%; at lower temp. the conversion was not complete. The conversion reaction was accompanied by a decompr. reaction yielding CH<sub>4</sub>. At 450° and higher no unsat'd hydrocarbons were formed. At temps. over 550° the CH<sub>4</sub> content of the product decreased (at 700°

it was 1.5%), but simultaneously the CO content increased. The use of pure Ni catalyst at lower temp. yielded H with an admix. of CH<sub>4</sub> more than 1%, while at higher temp. CO was formed in great quantity. The choice of carrier for the catalyst is of great importance, the best carrier is kieselguhr and charlotte, while a gel carrier caused the sintering of triplets. A ratio of 2Ni and CuO<sub>2</sub> to the Ni catalyst increased the yield of gas and H and decreased the CO and CH<sub>4</sub> contents. The method of prep. of mixed catalyst also was of great importance, the best method being the impregnation of the Ni catalyst with the admix. of nitrates. The best mixed cata-

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lyst was charlotte of kieselguhr impregnated with Ni with "promoter L" (compr. is not disclosed), which yielded at 550° (with triple excess of steam) 99.3-99.8% of H contg. CH<sub>4</sub> 0.4-0.6 and CO 1.3-1.5%. The influence of various catalysts at the same temp. on the conversion led to the assumption of the reformation of not only CO and H but also CO<sub>2</sub>, as a result of the primary reaction between C<sub>2</sub>H<sub>6</sub> and C<sub>4</sub>H<sub>10</sub> with water vapor. Data are tabulated. Thirty references.

A.A.Podgorny

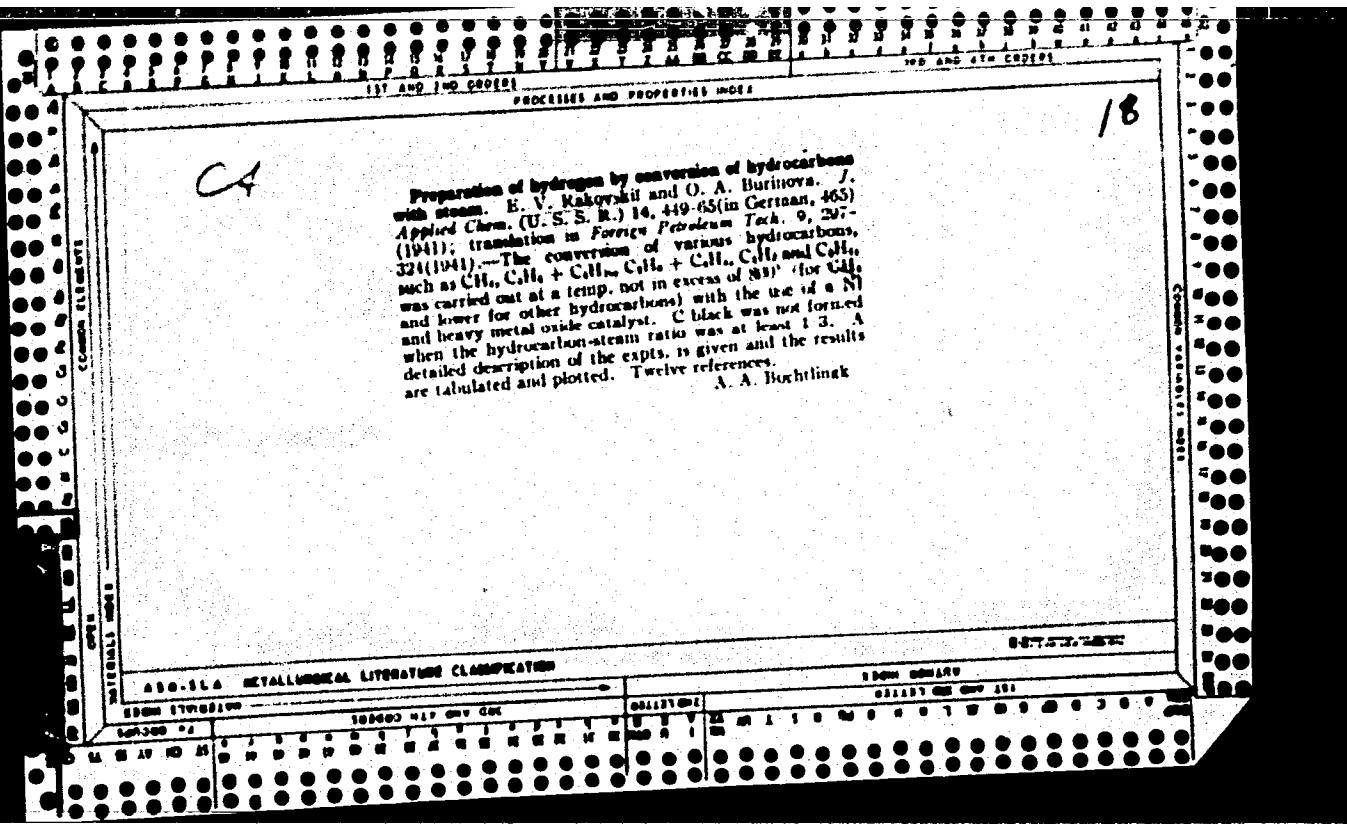
*B.C.**B-1-2*

Shale tar phenols. N. V. RAKOVSKI, D. N. ANDREEVSKII, and B. A. KAMENSKI (Chim. Tverd. Topl., 1957, 8, 1009-1107).—The acid constituents of the 180°-300° fraction of Udro shale tar were extracted with 10% eq. NaOH, separated with 15% H<sub>2</sub>SO<sub>4</sub>, and dissolved in Et<sub>2</sub>O, and solution was treated with 7% eq. NaHSO<sub>3</sub> to remove carboxylic acids. The residue was separated into phenols and acidic asphaltenes by treatment with 30-70° light petroleum. The extracted phenols were purified by further treatment with NaOH and H<sub>2</sub>SO<sub>4</sub> and by dissolving in Et<sub>2</sub>O to remove neutral oils. The acidic asphaltene residue was also freed from light petroleum. The original fraction yielded 12.6 wt.-% of acidic constituents (90-4% was phenols). The latter were fractionated as 1 atm.: 200-230° 34%, 240-260° 6%, 260-290° 20%, 290-340° 18%, 340-380° 6%; the average mol. wt. was 815. The phenols, on hydrogenation over Mo<sub>3</sub> for 3 hr. at 360-380° with 27-40 atm. initial H<sub>2</sub> pressure, yielded 76.5% (on wt. of phenols) of neutral oil; 56% of this oil distilled below 280°. Particulars of the fraction are given. The acid asphaltenes (mol. wt. 260) on hydrogenation (370-390°, 43-45 atm. initial H<sub>2</sub> pressure) yielded 74.8% of neutral oil (on crude); 71% of this oil distilled below 280°. Particulars of the fractions are given. D. G.

## A.I.D.-114 METALLURICAL LITERATURE

CONT.

Preparation of carbon disulfide from hydrogen sulfide and hydrocarbons. E. V. Rakovskii and A. I. Kurneva. *J. Applied Chem. (U. S. S. R.)* 13, 1165-41 in French, 1441(1940). The reaction  $H_2S + C_2H_2 \rightarrow CS_2 + H_2$  was investigated at 890, 900, 950 and 1000° at various velocities of gas mixt., and in the presence of Th oxide on asbestos. The observed equil. consts. deviated by  $\pm 15\%$  from the calcd. The heat effect of the reaction was calcd. as +55,307 cal., and the heat of formation of  $CS_2$  to the equation  $C_{2H_2} + S_{2H_2} = CS_2 + 2H_2S$  given by Andreeva and Lyudkowskaya (cf. *J. Russ. Phys.-Chem. Soc.* 21, 773(1889)) is not correct, since they assumed that only one mol. of  $H_2S$  was produced. Data are tabulated. A. A. Podkorytov



Photooxidation of aromatic sensitized by methylene blue. B. V. Grishkan and Kh. Rakipova (State Univ., Tashkent). *J. Phys. Chem. (U.S.S.R.)* 19, 279-81 (1945); *cf.* preceding abstr.—Methylene blue B entra is bleached by alk. soln. of  $\text{AgO}_2$  in the dark, but the mmt. does not absorb O. The rate  $\nu$  of O absorption is proportional to the light intensity, if the concn. of methylene blue is  $10^{-4}$ , and tends to a satn. for the concn. of  $3 \times 10^{-4}$  g./cc. The  $\nu$  has a max. at about  $10^{-4}$  g./cc. of methylene blue and increases with the concn. of  $\text{Na}_2\text{AgO}_2$  less than linearly. It is zero for the ratio  $\text{NaO}_2/\text{AgO}_2 = 2$  and is high and independent of the ratio when the latter is 3.2 to 4.5. The kinetics of this reaction are very similar to those in the presence of eosin, although eosin is not bleached.

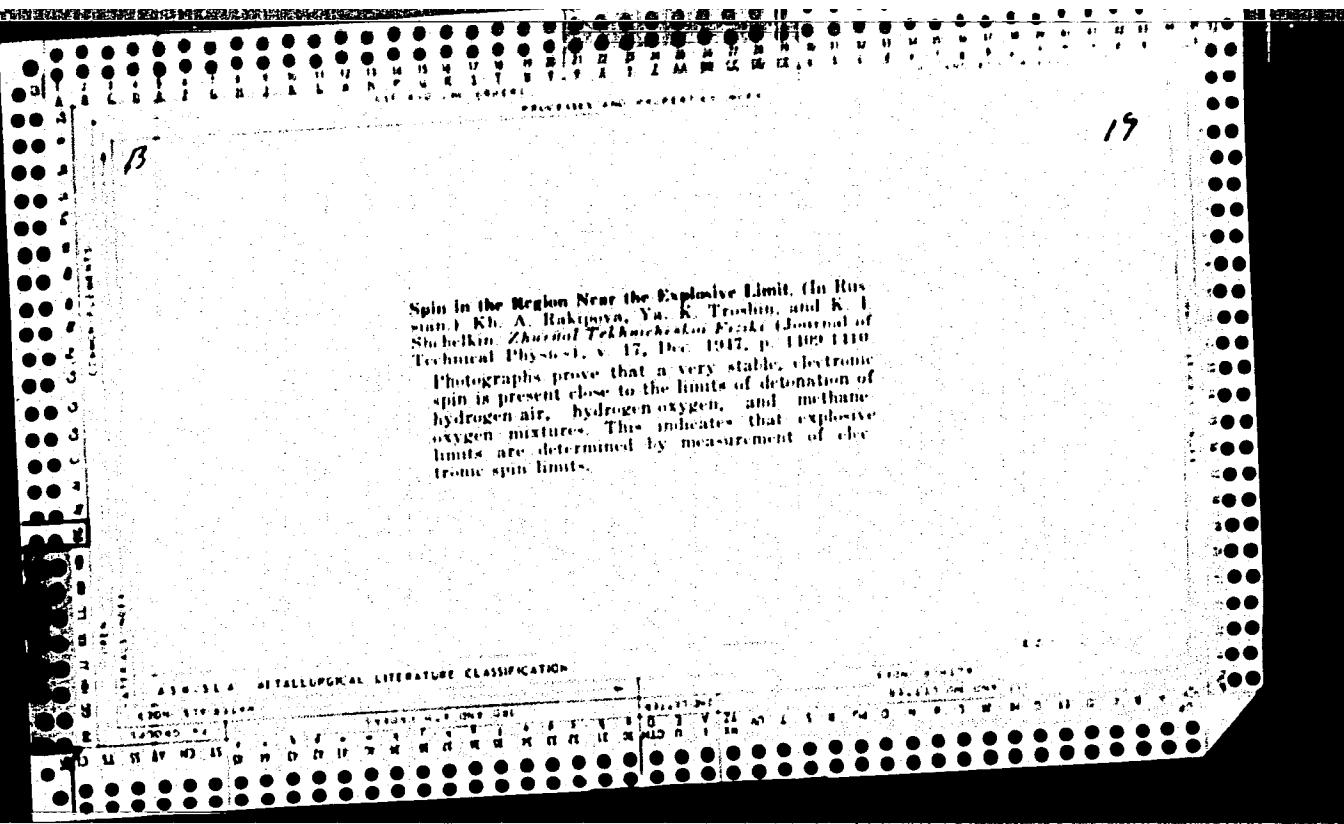
J. J. Bikerman

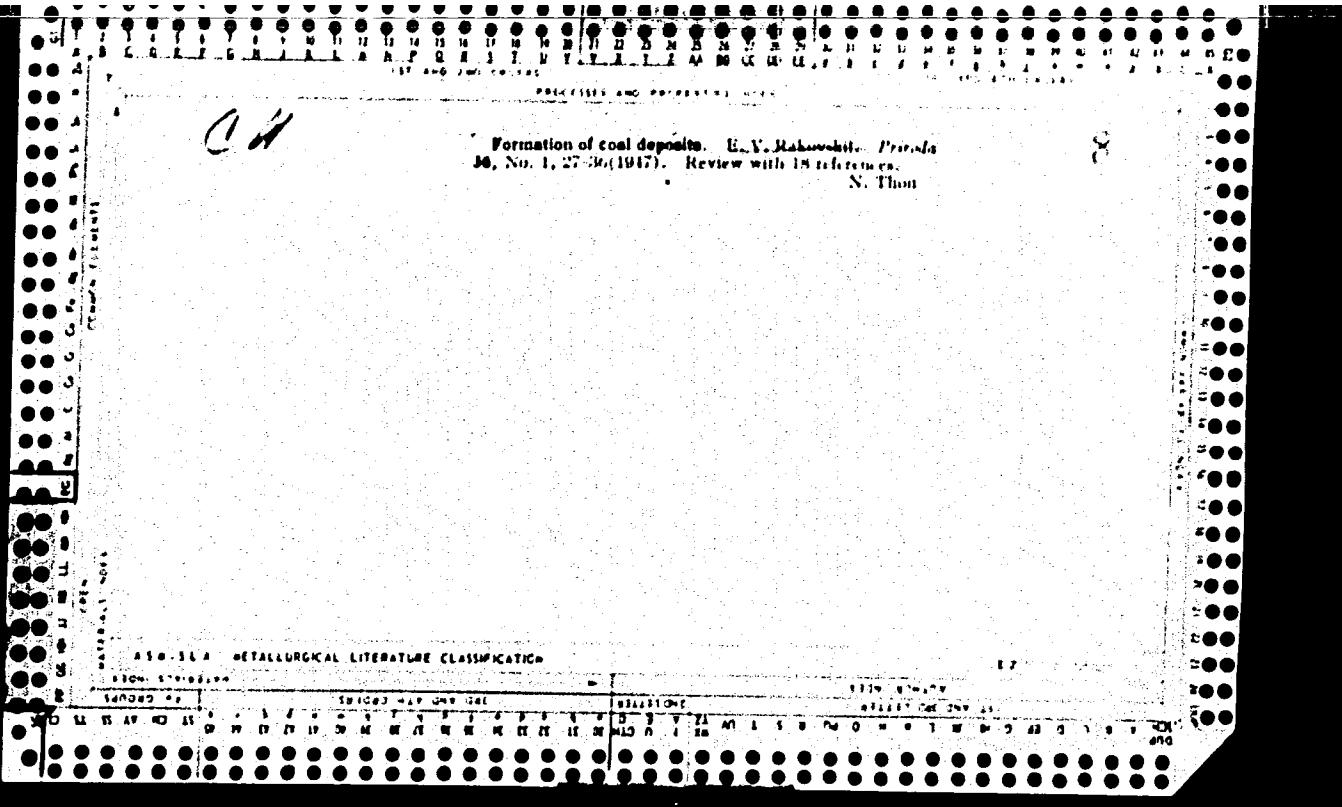
AMERICAN METALLURGICAL LITERATURE CLASSIFICATION

FROM STUDY

CA

The measurement of the normal velocity of flame in  
combustion products. Kh. A. Babikov, Ya. K.  
Troshin, and K. I. Shchelkina (Inst. Sib. U.S.S.R.).  
*Zhur. Fizika*, No. 17, 1597-1600 (1967).—Gor'kov's snap-  
bulb method (C.A. 66, 2046) was used to measure flame  
velocities for mixtures with 30.0-70.0% C<sub>2</sub>H<sub>2</sub>. Up to 30%  
C<sub>2</sub>H<sub>2</sub>, the flame speeds remained constant during burning;  
but at higher C<sub>2</sub>H<sub>2</sub> contents, the velocity was unipolarized,  
during burning. This effect was due to autoignition,  
in agreement with London's theory (C.A. 59, 2023).  
For mixtures with 67.0-80.0% C<sub>2</sub>H<sub>2</sub> there was an abrupt  
transition from combustion to detonation. H. K. L.





RAKOVSKIY, Ye. V.

Rakovskiy, Ye. V. and Makarov G. N. "On the use of coal tar in the coking of coal"  
(Summary of the paper), Sbornik. o nauch. rabochikh chlenov Vsesoyuz. khim. o-va im.  
Mendeleyeva, 1948, Issue 3, p. 7-9

SG: U-3261 April 10, 53 (Letopis 'Zhurnal 'Ilyka' Statey, No 11, 1949)

RAKOVSKIY, E. V.

47/49T13

USSR/Chemistry - Fuels, Solid  
Chemistry - Fuels - Ratings

Nov 48

"Concerning Formulas Which Link the Efficiency  
Value of Fuel With Its Elementary Composition,"  
Ye. V. Rakovskiy, N. A. Kovalenko, 4 pp

"Zhur Priklad Khim", Vol XXI, No 11 - p.1114-17

Analyzes subject formulas. Develops formulas  
linking efficiency value and elementary compo-  
sition of peat and bituminous shale. Submitted  
22 Mar 48.

47/49T13

*Ca*

21

The problem of formation of coal tar in the coking of coal. R. V. Babayev and G. N. Makarov. *Dobroslavsk. Nauch. S.S.R.* 81, 321-3 (1948). Pyrolysis at 700-800° of the primary tar, formed from coal at 500-550°, yields not over 6-10% of liquid products b. below 100°, whereas the same fraction, obtained in regular coking at 700-800°, attains 15-17% with respect to the low-temp. tar. That this difference is due, to a large extent, by the fact that, in the coking process, the primary (low-temp.) tar is pyrolyzed in the presence of gases, resulting in (1) changes of the time of stay of volatile products in the high-temp. zone, (2) changes of concn., and in (3) chem. reactions with the constituents of the primary tar, was demonstrated by expts. of pyrolysis of a primary tar at 600-720° in a stream of  $N_2$  (to test the effects 1 and 2) and in a stream of a hydrocarbon gas (as a test for effect 3). With increasing amt. of  $N_2$ , the yield of gas increases somewhat and the yield of coke decreases slightly, but the amt. and the fractional compn. of the liquid pyrolyzate remains practically unchanged; however, the content of unsatd. compds. in both gas and liquid increases with increasing diln. with  $N_2$ ; this fact indicates inhibition of the subsequent stages of polymerization of unsatd. compds. Hydrocarbon gas has a much stronger effect. Thus, increase of the amt. of hydrocarbon gas from 20 to 170 wt. % of the original primary tar increases the yield of pyrolyzate by 36% and that of gasoline by 63%, and decreases the yield of coke by 57%. With equal amts. of  $N_2$  and of hydrocarbon gas, under otherwise identical conditions, the yield of pyrolyzate is by 23%, and that of gasoline by 32% higher in the latter case. The yields of gas and of coke are lower in the former case, by 10 and by 29%, resp. It clearly demonstrates that chem. reactions between the primary tar and the hydrocarbon gas play a decisive role in the formation of the secondary tar.

N. Thon

CA

Formulas relating the calorific value of solid fuels with their elementary composition. E. V. Rokovskii and N. A. Kovalevko, *Doklady Akad. Nauk SSSR*, 61, 894, 72 (1948). The formula of Mott and Spenser (U.S. 3,228,228) is inadequate for fuels with a high C content, as it disagrees with direct calorimetric data to the extent of 7-10%. Kovalev's formula  $Q = \alpha K$ , where  $Q$  = heat of combustion,  $K$  = amt. of O<sub>2</sub> necessary for the combustion of 1 g. of the fuel,  $\alpha$  = coeff. depending on the fuel, and equal to 3000, 3250, 3100, resp., for anthracite and hard coal, wood, shale, and soft coal, permits evaluation

of the age of the fuel. Adequate formulas, relating  $Q$  with the content of C, H, and O, are derived from data of typical contents of O in its various forms in different fuels. The amt. of O in the form of  $CO_2H_2$  = OH, CO, O, resp., is, in peat, 1.3, 2.5, 1.3, 2; in soft coal, 1.10, 3.2, 3.4, 2; in hard coal 0.0.0.1, 0.0.0.1, 2-3, 0.1; in anthracite, 0.0, 1, 0.1. This leads, for peat, to  $Q = 81(C - 1.3) + 37(O - OH)$ ; for shale to  $Q = 81(C - 3.4) + 388(H - OH)$ ; for shale to  $Q = 81(C - 0.2) + 310(O - 0.025OH)$ . These formulas agree with emp. data within 1.5%.

## ASB-3A-METALLURGICAL LITERATURE CLASSIFICATION

RAKOVSKIY YE. V.

PL 11/49791

USER/Mining  
Fuels, Solid  
Peat

Mar 69

"A New Good Textbook on Hydropeat," Ye. V.  
Rakovskiy, Prof N. D. Kholin, 1 p

"Mehk Trud i Tyazh Rabot" No 3

Reviews Prof M. A. Vellar's excellent textbook,  
"Technology of Hydropeat," published in 1948.  
Although some aspects under "modern technology  
in the hydropeat industry" may never materialize,  
book should serve students well for many years.

44/49791

123. FORMATION OF COAL TAR IN COKE OVEN. Rakovskii, E. V. and Makarov, O. N. (Zhurnal Prikladnoi Khimii (J. Appl. Chem.), 1949, vol. 22, 400-408; abstr. in Chem. Abstr., 1949, vol. 43, 600-609).

The transformation of the primary tar into the high temperature tar is guided not only by the temperature and duration of the treatment in the coke oven but also by reactions with the gas phase and catalytic processes on the coke surface. Dilution of the primary tar by inert gases (N<sub>2</sub>) at 690-720° gave decreased yield of coke, especially at 720° (9% instead of 14%), and increased yield of products, b. under 100°, the use of re-circulated gas gives even lesser coke formation and still higher yields of light boiling fractions up to 22% of total which is a limiting figure at 690-720° at the highest degree of recirculation (130% at 720° or 190% at 690°). It was shown that the actual pyrolysis reaction requires but 5.5 sec. contact in the laboratory installation and probably the correct value is 2-2.5 sec. Both the coke formation and the light fraction formation are completed in this brief contact time.

AB-1A METALLURGICAL LITERATURE CLASSIFICATION

ITEMS CLASSIFIED

SEARCHED

SEARCHED WITH ONE DOT

CLASSIFIED

SEARCHED

SEARCHED WITH ONE DOT

L 23522-60 ENT(1)/SEC(k)-2/EWA(h)

ACC NR: AP6012208

SOURCE CODE: UR/0237/66/000/004/0001/0005

AUTHOR: Rakovskiy, Yu. N.

28  
B

ORG: none

TITLE: Analysis of the effect of background noise on the threshold sensitivity of a pulse-modulated photoelectric indicator 25

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 4, 1966, 1-5

TOPIC TAGS: noise theory, photoelectric sensor, radiation detector

ABSTRACT: Derivation was made of the threshold sensitivity of a pulse-modulated photoelectric indicator, allowing for internal and background noise. The relationship between threshold sensitivity calculated in this manner and that calculated without taking background noise into account was then established. The degree of impairment of the indicator's threshold sensitivity due to background noise was also determined. The model photoelectric indicator under consideration featured a lens, a radiation detector (in the focal plane of the lens), and an optimal electric filter. Radiative flux was modulated by moving the image of an object with respect to the radiation detector photocell(s). It was found that the relationship between pulse width, scanning field and time, number of detector elements, etc., and between the signal-to-noise ratio and the detection error is determined by the structure of the photoelectric indicator and can be found for each individual case. The derived

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UDC: 621.383

L 23322-66

ACC NR: AP6012208

relationships hold in the cases of  $\beta_0 \alpha_0$  (where  $\beta_0$  and  $\alpha_0$  are the angular dimensions of a photosensitive area) and white noise. Orig. art. has: 2 figures and 35 formulas. [YK]

SUB CODE: 0918 SUBM DATE: 02Oct65/ ORIG REF: 003/ ATD PRESS: 4232

Card 2/2 FV

RAKOVSKY, Julius; ALDOVA, Eva

Isolation of strains of the new Enterobacteriaceae group  
"Bartolomeu" in Cuba. J. hyg. epidem. (Praha) 9 no.1:112-114  
'65

1. Microbiology Department, District Hygiene and Epidemiology  
Station, Topolcany, and Institute of Epidemiology and Micro-  
biology, Prague.

RAKOVSKY, Ladislav, MUDr

Introduction of the new diet system in hospitals in Slovenia.  
Sborn. pathofysiol. trav. vyz. 8 no.3:177 Aug 54.

1. Oblastny ustav pre vyskum vyzivy ludu, Bratislava.  
(DIETES)

new system in hosp. in Czech.)  
(HOSPITAL ADMINISTRATION

food serv., new diet system in Czech.)

RAKOVSKY, Gabor

Material planning proposal for foundries. Koh lap 9 no. 3:  
Supplement Ontode 5 no. 3: 63-65 Mr '54.

RAKOW, WLADYSLAW

Paszportyzacja urzadzen stalowni. Warszawa, Panstwowe Wydawn.  
Techniczne, 1954. 32 p. (Warsaw. Instytut Ekonomiki Organizacji  
Przemyslu. Prace, zesz. 16)

SOURCE: East European Acession List (EEAL) Library of Congress  
Vol. 5, no. 8, August 1956

RAKOWICZ, K.

Concerning the export of Polish machine tools and woodworking machinery. p. 236.  
(PRZEMYSŁ DRZEŻNY. Vol. 7, no. 8, Aug. 1956, Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957.  
Uncl.

RAKOWICZ, Zygmunt

Poland's export and import of machines and industrial equipment.  
Przegl techn 79 Special issue: 275-277 Je '61.

JASINSKI, Zdzislaw; KWIATKOWSKI, Witold, inz.; CZARNECKI, Henryk, mgr.;  
MACKIEWICZ, Leon, mgr. inz.; RAKOWICZ, Zygmunt

Polish exporters and importers discuss. Przegl techn no.23/24:6  
17 Je '62.

1. Dyrektor handlowy Centrali Handlu Zagranicznego Minex, Warszawa  
(for Jasinski). 2. Dyrektor naczelnny Polimex, Warszawa (for  
Kwiatkowski). 3. Naczelnny dyrektor THZ Elektrim, Warszawa (for  
Czarnecki). 4. Dyrektor Przedsiębiorstwa Handlu Zagranicznego  
CEKOP, Warszawa, (for Mackiewicz). 5. Dyrektor naczelnny  
Metalexport, Warszawa (for Rakowicz).

P/526/62/003/004/002/002  
A055/A126

AUTHOR: Rakowiecki, Tadeusz

TITLE: New method for determining the total solar eclipse

SOURCE: Towarzystwo Naukowe w Toruniu. Studia. Sectio F. Astronomia.  
v. 3, no. 4, 1962, 11 - 37

TEXT: A detailed description is given of a method permitting the determination of the central eclipse point C, the extent of the total and partial eclipse (measured from point C) and the phase of the eclipse for a point  $(\varphi, \lambda)$  on the Earth's surface. The underlying data are: the geocentric equatorial coordinates of the Sun  $\alpha, \delta, D = \frac{1}{\sin \varphi}$  and of the Moon  $\alpha', \delta', d = \frac{1}{\sin \varphi'}$ , ( $\varphi$  and  $\varphi'$  being the parallaxes of the Sun and the Moon, respectively); the real radii of the Sun and the Moon. The method consists of: 1) The determination of the central eclipse point C at the time t (universal time). Calculated are here the coordinates  $\alpha'_0, \delta'_0, D'$  of the Sun with respect to the Moon; the angle  $k$  (Fig. 1) of the spherical triangle PCT (pole, point C, center of the Earth); the distance LC (from the Moon to point C) and the geocentric coordinates of point C; the

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P/526/62/003/004/002/002

A055/A126

New method for determining the total solar eclipse

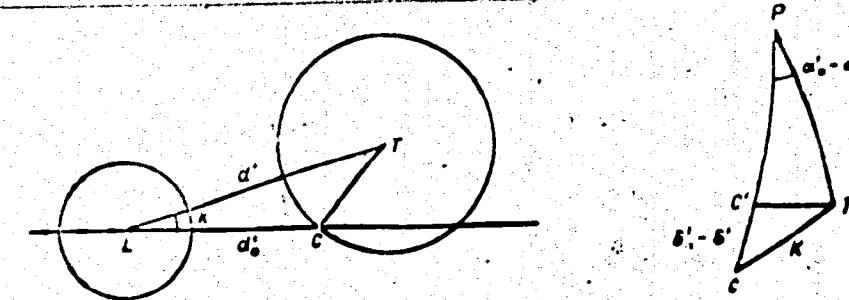
equatorial geocentric coordinates of point C; the geographical longitude and latitude of point C. 2) The determination of the full-shade eclipse. 3) The determination of the extent of the partial eclipse in the LCT-plane (extent towards the equator and towards the pole). 4) The determination of the extent of the partial eclipse in any axial section of the penumbra cone. Three cases are examined here: a) the apothem of the section falls on the Earth; b) it is tangent to the Earth; c) it passes above the Earth. 5) The determination of the phase of the eclipse as observed from a point ( $\varphi'$ ,  $\lambda$ ,  $c$ ) on the Earth's surface (two different methods for determining the phase are described). 6) The determination of the phases of the eclipse in the points (on the Earth) situated along an arc starting from point C and forming an angle  $\theta$  with the meridian CP. 7) The determination of the points on the Earth where occurs the maximum phase (at the time  $t$ ). 8) The determination of the time of the maximum phase of the near-by positions. There are 17 figures.

Card 2/3

P/526/62/003/004/002/002  
A055/A126

New method for determining the total solar eclipse.

Figure 1.



Card 3/3

RAKOWIECKI, T.

RAKOWIECKI, T. Determination of the Orbit of a Spectroscopic Binary  
with the Help of the Time of Opposite Positions. Torun.  
Uniwersytet/ Obserwatorium Astronomiczne. Bulletin no. 4, 1948,  
p. 3-13

RAKOWIECKI, T.

RAKOWIECKI, T. Determination of the Orbit of a Spectroscopic Binary  
with the Help of Opposite Positions. Po<sub>n</sub>nanskie Towarzystwo  
przyjacio<sub>l</sub> nauk. Bulletin, Serie B: sciences mathematiques et  
naturelles, 1948, no. 9, p. 66-73.

RAKOWIECKI, T.

RAKOWIECKI, T. Determination of the Orbit of A Spectroscopic Binary  
with the Help of the Most Remote and Nearest Distances to the  
Line of Knots in Relation to the Earth. Poznanskie Towarzystwo  
przyjaciol nauk. Bulletin, Serie B: sciences mathematiques et  
naturelles, 1949, no. 9, p. 166-169.

PAPLINSKI, Zbigniew; RAKOWSKA, Danuta; LITWIN, Miroslaw

Treatment of bleeding gastric and duodenal ulcers. Polski przegl. chir.  
30 no.5:493-496 May 58.

(PEPTIC ULCER, hemorrhage,  
surg. (Pol))

Klippel-Trenaunay syndrome. Pol. tyg. lek. 19 no.28:1113-1114  
13-20 J1'64

1. Z I Kliniki Chirurgicznej Akademii Medycznej w Lublinie  
(kierownik: prof. dr. T. Jacyna-Onyksikowicz) i z Zakladu  
Radiologii Akademii Medycznej w Lublinie (kierownik: doc.  
dr. K. Skorzynski).

KEMULA, W.; RAKOWSKA, E.; KUBLIK, Z.

Application of the hanging mercury-drop electrode to an investigation  
of redox processes of uranium salts by cyclic voltammetry. Coll Cz  
Chem 25 no.12:3105-3110 D '60. (ZEAI 10:9)

1. Institute of Physical Chemistry, Polish Academy of Science and  
Department of Inorganic Chemistry University Warsaw, Poland.

(Electrodes, Dropping mercury) (Uranium)  
(Voltmeter)

KEMULA, Wiktor; RAKOWSKA, Ewa

Cyclic volt-ampere measurements of aqueous solutions of chromium compounds on the stationary hanging mercury drop electrode. Chloride complexes of Cr<sup>III</sup>. Rocznik chemii 36 no.2:203-213 '62.

1. Department of Inorganic Chemistry, University, Warsaw, and Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw.

KEMULA, W.; RAKOWSKA, E.

Application of the hanging mercury drop electrode to an investigation of halogen complexes of chromium (III). Bul chim PAN 9 no.10: 657-662 '61.

1. Department of Inorganic Chemistry, University, Warsaw and Institute of Physical Chemistry, Polish Academy of Sciences.

(Chromium) (Electrodes, Dropping mercury)

KEMULA, Wiktor; CHODKOWSKI, Jerzy; BALASIEWICZ, Michal; KORNACKI, Jacek;  
RAKCWSKA, Ewa; VINCENZ, Alina

Polarographic investigation of some derivatives of  $\rho$ -nitroacetophenone,  
 $\rho$ -nitropropiophenone, and 1- $\rho$ -nitrophenyl-1,3-propanediol. Roczn  
chemii 33 no.6:1485-1493 '59. (EEAI 9:9)

1. Katedra Chemii Nieorganicznej Uniwersytetu, Warszawa. Zaklad  
Fizykochemicznych Metod Analitycznych Instytutu Chemii Fizycznej Pol  
Polskiej Akademii Nauk, Warszawa.  
(Polarograph and polarography)  
(Nitroacetophenone)  
(Nitropropiophenone)  
(Nitrophenylpropanediol)

c A

2 3

✓ Viscosity as an index of evaluation of resin properties for papermaking purposes. Janina Rakowska. *Perglaz Papier*, 7, 210-11 (1951).—A new method for determining viscosity of resin is described. It consists of measuring the time for a steel ball of  $\frac{1}{4}$  in. diam. to descend 100 mm through molten resin at  $93^{\circ}$  in a special test tube. A resin of good quality should have a viscosity of at least 10 sec. T. R. Zegree.

Distr: 4E3d/4E2c(j)

1 Certain cases of the anomalous polarographic reduction of iodate and bromate/iodo. W. Kemula and B. Rakowska (Polish Acad. Sci., Warsaw), Z. Physik. Chem. (Leipzig) Sonderheft July, 1958, 33-45.—Investigation of the conditions which lead to the occurrence of a min. in the limiting current for reduction of  $\text{IO}_4^-$  and  $\text{BrO}_3^-$  established the following facts: (1) No min. occurs with KCl only as supporting electrolyte. (2) A min. occurs for the first reduction step if  $\text{MgCl}_2$  (or the chloride of another multivalent cation whose hydroxide is insol.) is the supporting electrolyte. (3) The height of the limiting current increases and the depth of the min. diminishes as  $\text{MgCl}_2$  concn. is increased, but the equiv. ratio,  $\text{Mg}^{++}/\text{anion}$ , at which the min. occurs depends on the overall electrolyte concn. Similar results ensue if the ionic strength of a soln. contg.  $\text{MgCl}_2$  is increased by addn. of KCl. (4) Addn. of either  $\text{NH}_4\text{Cl}$  or gelatin largely nullifies the min.-producing effect of  $\text{MgCl}_2$ . (5) The reduction of org. nitro compds. undergoes similar changes to those found for  $\text{IO}_4^-$  and  $\text{BrO}_3^-$ . It was concluded that the effects of multivalent cations are connected with the ppn. of their insol. hydroxides on the surface of the Hg drop as a result of  $\text{OH}^-$ -ion production at the drop accompanying the reduction. However, this explanation was not entirely satisfactory when applied to the data on the org. nitro compds.

H. K. Zimmerman

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dc

RAKOWSKA - KA-27/MK/H, ZH/12-1A

Poland/Chemical Technology - Chemical Products and Their Application. Treatment  
of Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62550

Author: Rakowska-Kaszynska, Janina

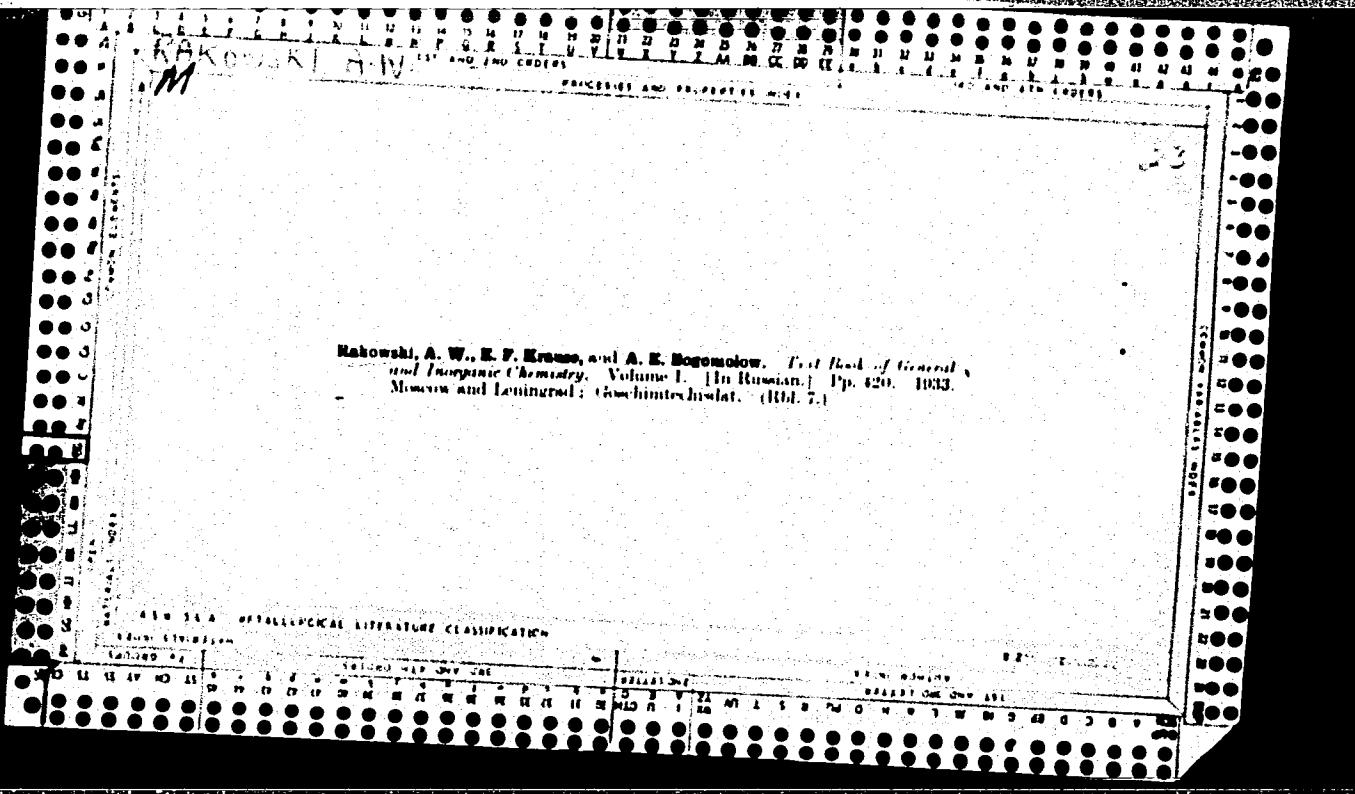
Institution: None

Title: Determination of Free Sulfur in Desulfurizing Composition (Direc-  
tions)

Original  
Periodical: Oznaczenie zawartosci siarki wolnej w masach pogazowych (Instrukcja  
analytyczny), Prace Inst. celul-papiern., 1953, 2, No 1, 66-68;  
Polish; Russian and English resumés

Abstract: Description of a rapid method for determining the content of "free  
S" (converted to SO<sub>2</sub> on calcining in pyrite furnaces) in desulfuriz-  
ing composition, which consists in an extraction with CS<sub>2</sub>.

Card 1/1



S/081/63/000/002/012/088  
B193/B102

AUTHORS: Kemula, Wiktor, Rakowska, Ewa

TITLE: Cyclic volt-ampere characteristics of aqueous solutions of chromium compounds using stationary suspended mercury drops as electrodes. Complex chlorides of Cr(3+)

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 89, abstract 2B560 (Roczn. chem., v. 36, no. 2, 1962, 203-213 [Pol.; summaries in Russ. and Eng.])

TEXT: It is shown by the method of cyclic volt-ampere characteristics with suspended mercury drops that reduction of  $(Cr(H_2O)_6)^{3+}$  in solutions containing  $Cl^-$  or  $Br^-$  ions gives rise to  $Cr(2+)$  complexes, in which one or two  $H_2O$  molecules are replaced by halide ions. Anodic oxidation of these complexes leads to formation of  $(Cr(H_2O)_5Cl)^{2+}$  or  $(Cr(H_2O)_4Cl_2)^+$  ions, which are reduced in the second cycle at more positive potentials

Card 1/2

Cyclic volt-ampere characteristics ...

S/081/63/000/002/012/088  
B193/B102

than the  $(\text{Cr}(\text{H}_2\text{O})_6)^{3+}$  ions. The effects of pH, gelatines, temperatures and frequencies of applied voltage are investigated. The system  $(\text{Cr}(\text{H}_2\text{O})_{n-m})^{(3-m)+}/\text{Cr}(2+)$  ( $\text{X}$  is a halide ion) is reversible in 0.1 N KBr and almost reversible in 10 N  $\text{CaCl}_2$ . The same system is more or less irreversible in  $\text{KCl}$ ,  $\text{HCl}$ ,  $\text{K}_2\text{SO}_4$  and  $\text{HClO}_4$  solutions. [Abstracter's note: Complete translation.]

Card 2/2

RAKOWSKA, Ludwika

Hygiene and prevention of the diseases of the oral cavity with  
regard to diet. Czas. stomat. 18 no.4:389-394 Ap'65.

RAKOWSKA, Maria

Evaluation of protein consumption in Poland as compared with the  
needs according to the Commission of Experts of the FAO. Roczn.  
panat zatr. 15 no.3:247-255 '64.

I. Food and Nutrition Institute, Warsaw. Head: [prof. dr.]  
A. Szczygiel.

COUNTRY	: Poland	R-30
CATEGORY	:	
ABS. JOUR.	: RZKhit., no. 21 1959, no.	76849
AUTHOR	: Rakowski, A. and Gomolka, A.	
DATE	: Not given	
TITLE	: International Cooperation in the Paints and Varnishes Industry	
ORIG. PUB.	: Chemik, 11, No 10, 319-321 (1958)	
ABSTRACT	A report on the Second International Week of the Paints and Varnishes Industry held on 5-9 August 1958 in Danzig. Summaries of 16 papers are given. D. Yakesh	
CARD	1/1	

RAKOWSKI, Gustaw (Warszawa)

Analysis of continuous arches by the three moment equation.  
Archiw inz lad 9 no. 4: 397-406 '63.

RAKOWSKI, Gustaw, dr inz.

Calcualtion of internal forces in girders curved in space. Inz  
i bud 19 no.12:457~461 D '62.

1. Politechnika, Warszawa.

RAKOWSKI, Hipolit

Insulin sub-shock in the treatment of disseminated neurodermatitis.  
Polski tygod.lek. 15 no.45:1728-1730 7 II '60.

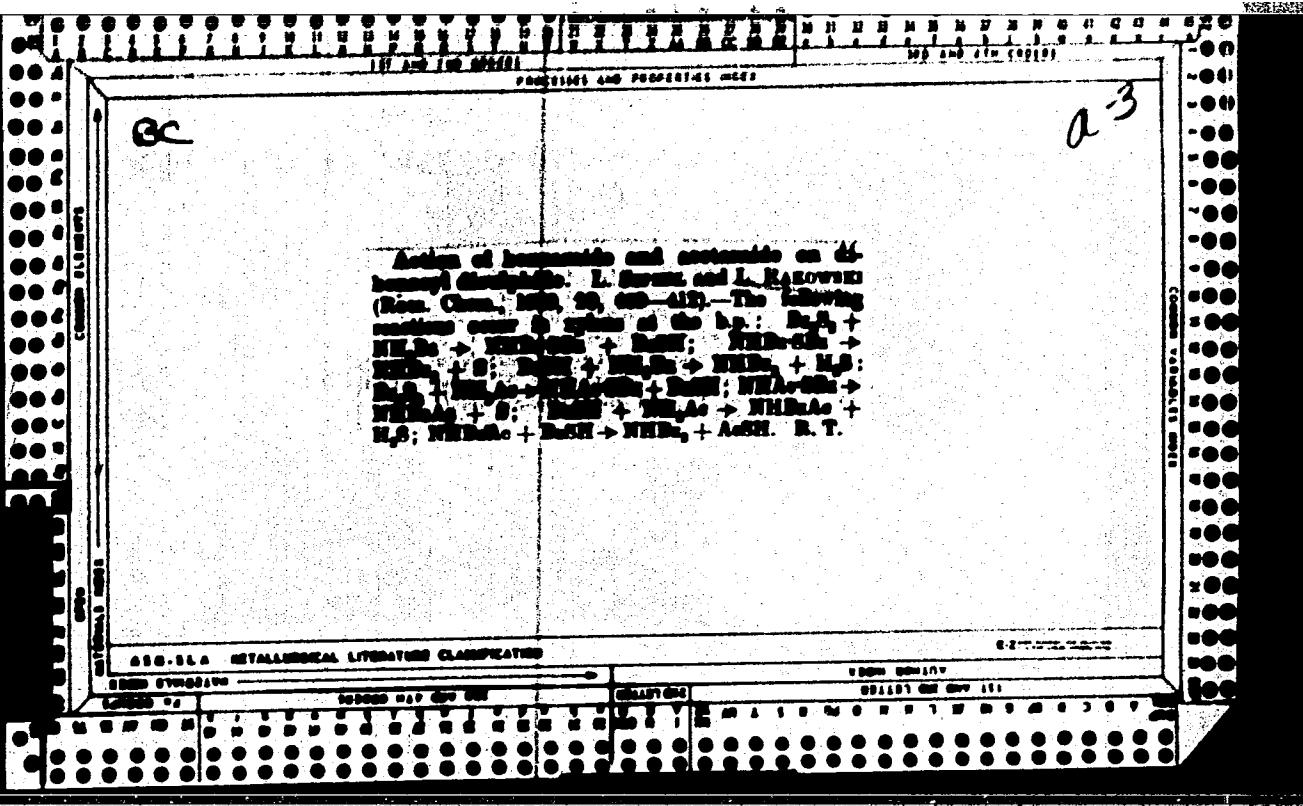
1. z Kliniki Dermatologicznej A.M. w Poznaniu; kierownik: prof.dr  
Adam Straszynski.  
(SHOCK THERAPY INSULIN)  
(NEURODERMATITIS ther)

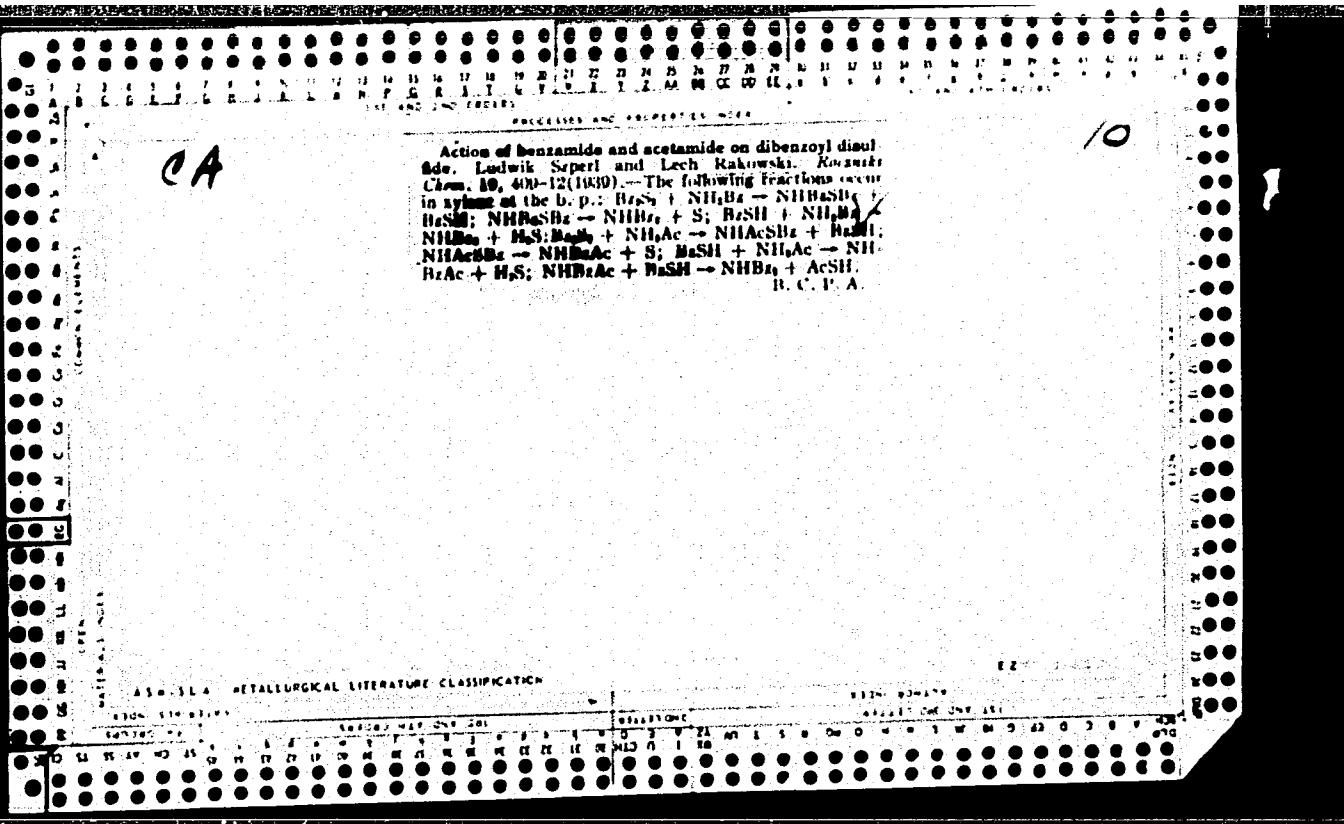
RAKOWSKI, Janusz, mgr. inz.

The organization of the studies in electric engineering at Cornell University. Przegl elektrotechn 38 no.3:118-120 Mr '62.

RAKOWSKI, Janusz, mgr. inz.

A scientific and technological conference on "thermal automation in general power plants." Pomiary 8 no.3:133-134 Mr '62.





RAKOWSKI, M.; MARKOWSKI, M.

Research on investments from the enonomic point of view. p/ 359

CHFMIK (Ministerstwo Przemyslu Chemicznego i Stowarzuszenie Naukowe-  
Technikow Przemyslu Chemicznego)

Warszawa, Poland

Vol. 1, No. 9, Sept. 1959

Monthly list of East European Asseccion (FFAI) LC, vol. 9, no. 1 Jan. 1960

Uncl.

PLAND/Chemical Technology - Processing of Solid Fossil Fuels.

H-22

Abs Jour : Ref Zhur - Khimiya, No 24, 1958, 82936

Author : Markowski, A., Rakowski, M.

Inst :

Title : Chemical Processing of Coke Gas.

Orig Pub : Gospod. planowa, 1958, 13, No 3, 27-34.

Abstract : Statistical data are given presenting the evidence as to the expediency of transforming the Polish by-product coke industry to a new method for the utilization of coke gas and isolating therefrom a series of components suitable as a raw material for chemical syntheses. Mainly a technical- economical effect is examined, which is produced by using hydrogen in the synthetic ammonia industry for the manufacture of synthetic fertilizers.

Card 1/1

- 12 -

RAKOWSKI, M.

Socjalistyczna elektryfikacja polski. Warszawa, Polskie Wydawn. Gospodarcze, 1953  
195 p. (Socialist electrification of Poland, illus., map, footnotes, tables)

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955  
uncl.

RAKOWSKI, A. W.

"Recherches dans le domaine des composés polyhétérocycliques. Mémoire V". Rakowski, A. W.  
et Nikitina, E. A. (p. 50)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1936, Volume 6, No. 1

RAKOWSKI, M.

"Progress in Technique and Economy." p.12  
(PRZEGLAD TECHNICZNY Vol. 75, no. 1, Jan. 1954 Warszawa, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Unci.

MARSHAL, POLAND

LA 1/49745

POLAND/Engineering  
Shipping  
Ships - Construction

May/Jun 48

"World Shipping Tonnage" Marian Rakowski, Engr, 3 pp

"Technika Morza i Wybrzeza" Vol III, No 5/6

Discusses world tonnage, compares its growth in last 50 years, speeds, types of construction, war losses, new construction under way in various countries. Gives size of Polish merchant fleet as of 1 Jan 47, and future plans for expansion of tonnage.

III

3/49745

RAKOWSKI, Stefan

When may a driver's license be revoked? Motor 11 no.48:4, 10  
2 D '62.

VYCORITA INDICA Sec 14 Vol 13/3 Radiology nrk 59

1597. CONGENITAL HYPOPLASIA OF THE LEFT PULMONARY ARTERY AND  
LEFT LUNG - Niedorzwój lewej tętnicy płucnej hipoplazja lewego płuca -  
Jach S. and Rakowski W. Zakt. Radiol. Oraz, Oddz. Gruźliczego  
Szpit. Wojskowego, Szczecin - POL. PRZEGŁ. RADIOL. 1958, 22/5 (253-  
257) Illus. 6

A rare instance of congenital underdevelopment of the left lung is presented. In this case (in a 21-year-old male) the first diagnosis was established radiologically during fluoroscopic examination, and was proved by bronchography, bronchoscopy and pneumo-angiography. The authors present historical data regarding pulmonary malformations and their classification by Boyden, and stress the rarity of such entities.

Marciniak - Wrocław (XIV, 18)

RAKOWSKI, Wiktor

Tissue reactions of guinea pig lung in experimental talcum pneumoconiosis. Gruzlica 32 no.8:671-676 Ag '64.

1. Z Zakladu Anatomii Patologicznej Pomorskiej Akademii Medycznej w Szczecinie (Kierowniki: prof. dr. K. Stojalowski).

RAKOWSKI, Wiktor; REMIGOLSKI, Szymon; PALKA, Henryk; JACH, Stanislaw

On the problem of diagnostic difficulties in primary tumors  
of the diaphragm. Gruzlica 30 no.8:767-774 '62.

1. Ze Szpitala Wojskowego w Szczecinie z Oddzialu Plucnego dr  
W. Rakowski Z Oddzialu Chirurgicznego dr S. Remigolski i z  
Gabinetu Radiologii dr S. Jach.

(DIAPHRAGM) (NEURILEMMOMA)  
(DIAGNOSIS, DIFFERENTIAL)

RAKOWSKI, Wiktor; KALINOWSKI, Tadeusz

2 cases of pulmonary actinomycosis. Gruzlica 31 no.7:813-816  
'63.

1. Z Oddzialu Plucnego Szpitala Wojskowego w Szczecinie  
Ordynator: lek. W. Rakowski i z Oddzialu Plucnego Szpitala  
im. Kazimierza Dluskiego w Stargardzie Ordynator: lek. T.  
Kalinowski.

(ACTINOMYCOSIS) (LUNG DISEASES, FUNGAL)

JACH, Stanislaw; RAKOWSKI, Wiktor

Underdevelopment of the left pulmonary artery. Polski przegl. radiol.  
22 no.5:253-257 Sept-Oct 58.

1. Z Zakladu Radiologii oraz z oddzialu gruzliczego Szpitala Wojskowego  
w Szczecinie.  
(ARTERIES, PULMONARY, abnorm.  
hypoplasia of left artery (Pol))

VORONOV, M.A.; KHORUZHENKO, M.V.; KARASEV, Ye.A.; BELYY, V.A.;  
LIVSHITS, G.A.; VOROPAYEV V.I.; GONSKIY, G.V.; MEL'NICHENKO,  
V.P.; MOLCHANOV, M.A.; OLYBIN, B.V.; NAVAGIN, Yu.S.; RAKOYED, A.I.;  
PETRIKOV, V.G.

Soviet inventions in the machinery industry. Vest.mashinistr.  
46 no.1:85-86 Ja '66. (MIRA 1981)

RAK-RAYEVSKAYA, A.A.

Development of new chromatographic methods of fine purification of concentrated zinc sulfate solutions. [Trudy] GIPKH no.51:4-7 '64.

Chromatographic method for fine purification of sodium thiosulfate solutions. Ibid.:8-9 (MTRA 18:5)

BANK, Istvan; MOLNAR, Endre; TOROK, Piroska, dr.; RAKSANYI, Arpad, dr.;  
~~OROSZLAI~~, Istvan; FINALY, Lajos; NAGY L. Denes; SZABO, Zoltan,  
dr.

Possibilities for the agricultural utilization of sewage  
waters in Hungary. Hidrologiai kozlony 36 no.1:69-76 F'56.

1. "Hidrologiai Kozlony" szerkeszto bizottsagi tagja (for  
Szabo).

GYOZO, Jozsef; LORANTH, Imre; RAKSANYI, Kalman; SZONYI, Istvan

Short-wave communication radio receivers; also, remarks by I.Szonyi.  
Muszaki kozl MTA 26 no.1/4:99 '60. (EEAI 9:10)

1. Mechanikai Laboratorium (for Gyozo, Loranth and Raksanyi)  
(Hungary--Radio)

RAKSHA, I.A., assistant (Kiyev)

Organization of dispensary service and early congenital treatment  
of children with congenital harelip and cleft palate in the  
right-bank of the Ukraine. Probl. chel.-lit. khir. no.1:97-101  
'65. (MIRA 12:10)

YAROVENKO, N.N.; RAKSHA, M.A.; SHEMANINA, V.N.; VASIL'YEVA, A.S.

New methods for preparing fluorinated carboxylic acids and  
difluoromethyl alcohol esters. Zhur. ob. khim. 27 no.8:2246-  
2250 Ag '57. (MLRA 10:9)

(Acids, Fatty) (Esters)

5(3)  
AUTHORS:

Yarovenko, N. N., Raksha, M. A.

SOV/79-29-7-13/33

TITLE:

Fluorination by Means of  $\alpha$ -Fluorinated Amines  
(Ftorirovaniye s pomoshch'yu  $\alpha$ -ftorirovannykh aminov)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2159-2163 (USSR)

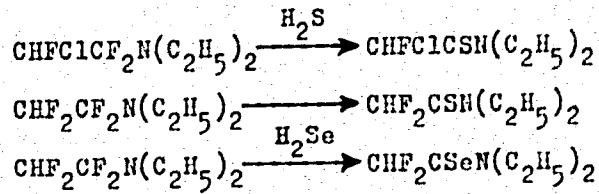
ABSTRACT:

In the investigation of the chemical properties of  $\alpha$ -fluorinated amines the authors succeeded in synthesizing new organofluorine compounds. They found that the amines  $RCF_2NR'$  react with alcohols to form alkyl fluorides. This reaction takes place easily with a simple mixing (yield up to 66 %) (Scheme 1). The reactions of the fluorinated amines  $RCF_2NR'$  were carried out in a similar way with carboxylic acids, with their salts or with thiocarboxylic acids under the formation of acid fluorides of carboxylic acids (Scheme 2). According to references 1 and 2, also the reactions of  $\alpha$ -fluorinated amines take place with  $H_2S$  and  $H_2Se$  under the formation of the hitherto unknown dialkyl amides of fluorinated thiocarboxylic and selenium carboxylic acids:

Card 1/2

Fluorination by Means of  $\alpha$ -Fluorinated Amines

SOV/73-25-7-13/83



The high mobility of fluorine atoms in  $\alpha$ -position to nitrogen and the ease with which they may be replaced by elements of group 6 may be explained by  $p\sigma$ -conjunction (Ref 4). The fluorinated amines necessary for these reactions are obtained by the reaction of the secondary amines with fluorinated olefines (Refs 2, 3) which takes place especially easily in the case of addition of secondary amines to trifluoro chloroethylene (Scheme 4). There are 5 references, 2 of which are Soviet.

SUBMITTED: June 6, 1958

Card 2/2

87535

S/073/60/030/012/020/027  
B001/B064

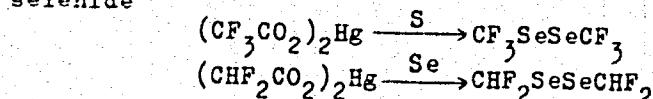
53600

AUTHORS: Yarovenko, N. N. and Raksha, M. A.

TITLE: Synthesis of Tetrafluoro Dimethyl-diselenide and Some of Its Properties

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 12, pp. 4064-4066

TEXT: The authors found already in a previous paper (Ref. 1) that - analogously to hexafluoro dimethyl-diselenide - the tetrafluoro dimethyl-di-

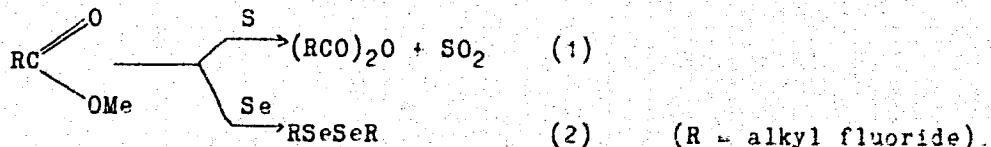


is formed in the decarboxylation of the mercury salt of difluoro acetic acid in the presence of selenium. A comparison of these reactions with the well-known reaction of trifluoro acetic acid salts with sulfur (Ref. 2) shows that the decarboxylation of fluoro carboxylic acid salts in the presence of the elements of group VI may proceed in two directions. The reaction depends on the position of the salt former in the periodic table.

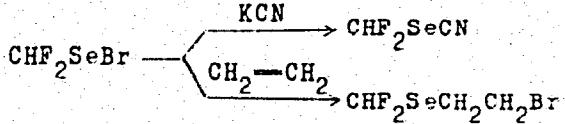
Card 1/2

87535

Synthesis of Tetrafluoro Dimethyl-diselenide S/079/60/030/012/020/027  
and Some of Its Properties B001/B064



Apparently, also at a further rise of the atomic number of the element, a decomposition of the salts in direction (2) occurs. It may be assumed that in the reaction of tellurium with salts of fluorinated carboxylic acids, fluorinated dialkyl ditellurides are formed. Difluoro methyl selenide  $\text{CHF}_2\text{SeBr}$  resulted from the reaction of tetrafluoro dimethyl-diselenide with bromine. It reacts readily with calcium cyanide under the formation of difluoro methyl selenocyanide and adds to ethylene under the formation of difluoro methyl- $\beta$ -bromoethyl selenide:



There are 3 references: 2 Soviet and 1 British  
SUBMITTED: January 11, 1960  
Card 2/2

87536

S/079/60/030/012/021/027  
B001/B064

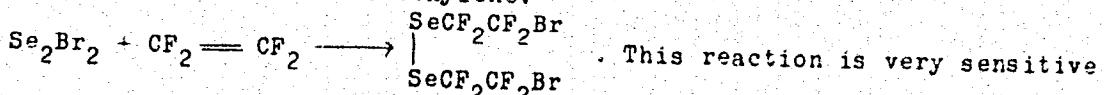
5.3600

AUTHORS: Yarovenko, N. N., Raksha, M. A., and Shemanina, V. N.

TITLE: Synthesis of Halogenated Dialkyl Diselenide and the Symmetrical Tetrafluoro Dichloro Dimethyl Disulfide

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 12,  
pp. 4069 - 4071

TEXT: Considering the papers of Refs. 1-5 on the synthesis of the halogenated dialkyl selenides, the authors found that the fluorinated dialkyl diselenides are also obtained when monoselenium bromide is reacted with tetrafluoro ethylene:



to temperature and longer heating. The best diselenide yield is obtained by gradually heating the initial products to 160°C in an inert solvent. When the reaction mixture is rapidly heated to a high temperature, the monoselenium bromide brominates the diselenide under the separation of

Card 1/2

"APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001344

YAROVENKO, N.N.; RAKSHA, M.A.; GAZIYEVA, G.B.

New methods for the preparation of esters and selenious acid  
ester halides. Zhur.ob.khim. 31 no.12:4006-4010 D '61.

(MIRA 15:2)

(Selenious acid)

APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R0013441

YAROVENKO, N.N.; RAKSHA, M.A.

Reaction of difluoromethyldifluoroacetate with potassium fluoride.  
Zhur.ob.khim. 31 no.12:4011-4012 D '61. (MIRA 15:2)  
(Acetic acid)  
(Potassium fluoride)

RAKSHA, M.A.; YAROVENKO, N.N.

Reaction of difluoroacetates with arsenic, arsenic trichloride,  
and nitrosyl chloride. Zhur. ob. khim. 32 no.1:273-274 Ja '62.  
(MIRA 15:2)

(Acetic acid) (Arsenic chloride)  
(Nitrosyl chloride)

RAKSHA, M.A.; POPOV, Yu.V.

Reaction of tetrafluoroethylene with piperidine. New method of  
obtaining difluoracetic acid. Zhur. ob. khim. 34 no.10:3465-  
3467 O '64. (MIRA 17:11)

L 4937-66 EWT(m)/EPF(c)/EWP(j) RM

ACC NR: AP5025680

SOURCE CODE: UR/0286/65/000/018/0026/0026

AUTHORS: Petrov, K. A.; Raksha, M. A.; Vinogradov, V. L.

ORG: none

TITLE: A method for obtaining divinylchloroanhydrides of substituted vinylphosphonic acids. Class 12, No. 174627

SOURCE: Byulleten' izobreteni i tovarnykh znakov, no. 18, 1965, 26

TOPIC TAGS: phosphonic acid, vinylphosphonic acid, fatty acid, phosphor organic compound

ABSTRACT: This Author Certificate presents a method for obtaining divinylchloroanhydrides of substituted vinylphosphonic acids by reacting simple esters with phosphorus pentachloride, with subsequent treatment of the reaction mixture with sulfur dioxide. To increase the range of starting raw materials, esters of simple fatty acids were used. In an alternative procedure, excess of starting ester is used as solvent.

SUB CODE: OC/

SUBM DATE: 11Jul64

Card 1/1 OC

UDC: 547.419.1-312.07  
09011575

ACC NR: AP6009513

SOURCE CODE: UR/0413/66/000/005/0022/0022

AUTHOR: Petrov, K. A.; Raksha, M. A.; Vinogradov, V. L.

ORG: none

TITLE: Synthesis of dichlorides of alkoxyvinyl- or alkoxyalkyl-vinyl-thiophosphinic acids. [ Class 12, No. 179314 | announced by the Military Academy of Chemical Defense (Voyennaya akademiya khimicheskoy zashchity)]

SOURCE: Izobreteniya, promyshlennye obraztsy, tovarnyye znaki, no. 5, 1966, 22

TOPIC TAGS: vinyl thiophosphinic acid, dichloride

ABSTRACT: An Author Certificate has been issued describing a method for the synthesis of dichlorides of alkoxyvinyl- or alkoxyalkylvinyl-thiophosphinic acids by the interaction of organic ethers with phosphorus pentachloride in an inert solvent followed by the treatment of the reaction mass with hydrogen sulfide. To broaden the variety of raw materials, the use of ethers of the aliphatic series is suggested.

[ LD ]

SUB CODE: 11/

SUBM DATE: 07Aug64/

Card 1/1 B1.G

UDC: 547.419.1'053.23.07

ACC NR: AP7000239

SOURCE CODE: UR/0079/66/036/004/0715/0718

AUTHOR: Petrov, K. A.; Raksha, M. A.; Vinogradov, V. L.

ORG: none

"Synthesis and Study of the Properties of Derivatives of Alkenephosphinic Acids. I. Production of Dichlorides of Substituted Vinylphosphinic Acids by the Reaction of Ethers with Phosphorus Pentachloride"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 4, 1966, pp 715-718

Abstract: A method was developed for synthesizing dichlorides of alkoxyvinylphosphinic and beta-alkoxy-alpha-alkylvinylphosphinic acids in good yields by the reaction of ethers with phosphorus pentachloride in an inert solvent or in excess ether, followed by treatment with sulfur dioxide. The dichlorides of beta-propoxy-alpha-methyl and beta-butoxy-alpha-ethylvinylphosphinic and -thiophosphinic acids were prepared and characterized for the first time. The study of the reactions of phosphorus pentachloride with ethers containing mixed radicals and the study of the properties of derivatives of alkenephosphinic acids are being continued. Orig. art. has: 1 table. [JPRS: 37,177]

Card 1/2

UDC: 547.341

0923 0776

L 048 2-61

ACC NR: AP7000239

TOPIC TAGS: phosphinic acid, organic synthetic process, phosphorus chloride

SUB CODE: 07 / SUBM DATE: 04 Mar 65 / ORIG REF: 023 / OTH REF: 005

*ms*  
Card 2/2

Far East

VINOKUROVA, M.D., rabotnik pavil'ona.; GALKINA, A.G., rabotnik pavil'ona.;  
GITIS, Ya.Ye., rabotnik pavil'ona.; DERGACHEVA, V.I., rabotnik pavil'ona.;  
ZAK, R.G., rabotnik pavil'ona.; RAKSHA, N.A., rabotnik pavil'ona.;  
SALTY, Ye.A., rabotnik pavil'ona.; TARAKANOV, G.N., rabotnik pavil'ona.;  
TOMASHUK, F.A., otv. red.; DMITRIYEVA, L.A., red.; LUKINA, L.Ye..  
tekhn. red.

[Far East] Dal'nii Vostok. Moskva, Izd-vo "Sovetskaja Rossiia,"  
1958. 109 p. (MIRA 11:12)  
(Soviet Far East--Agriculture)

RAKSHA, P.M., veterinarnyy vrach.

Work of the motorized disinfection squad of the Kiev Province  
Bacteriological Laboratory. Veterinariia 32 no.6:68-69 Je '55.  
(MLRA 8:7)

1.Zaveduyushchiy avtodesetryadom.  
(KIEV PROVINCE--DISINFECTION AND DISINFECTANT

RATSIMOR, Ye.; RAKSHA, V.

Traveling exhibitions. Sov.torg. 35 no.1:39-41 ja '62.  
(MIRA 15:1)  
1. Upravlyayushchiy tsentral'noy bazoy Rosgalanterei (for Ratsimor).  
(Retail trade--Exhibitions)

VOL'FSON, V.Ya.; ZHIGAYLO, Ya.V.; TOTSKAYA, Ye.F.; RAKSHA, V.V.

Nature of the active component of vanadium oxide catalyst for  
naphthalene oxidation. Kin. i kat. 6 no.1:162-166 Ja-F '65.  
(MJDA 18:6)

1. Institut fizicheskoy khimii imeni Pisarzhevskogo AN UkrSSR.

ZHIGAYLO, Ya.V.; SHPAK, L.I.; GAYDEY, T.P.; DUCHINSKAYA, V.I.; RAKSHA, V.V.;  
Prinimalni uchastiye: KURGANOV, A.,; LANTSOVA, M.A.

Chemical transformations and phase transitions of a zinc-  
chromium catalyst of methanol synthesis. Khim.prom. no.1:  
29-34 Ja '63. (MIRA 16:3)

1. Institut fizicheskoy khimii imeni L.V.Pisarzhevskogo AN UkrSSR.  
(Catalysts) (Methanol)

RAKSHA, Ye.I.

Machines for planting on stubble fields. Zemledelie 26 no.8:  
69-76 Ag '61. (MIRA 17:11)

1. Krasnoyarskiy nauchno-issledovatel'skiy institut sel'skogo  
khozyaystva.

Rakhshevskaya, I.V.

✓ Application of refractometric and colorimetric methods in analysis of therapeutic powder mixtures. L. I. Rapoport, F. D. Yaretskaya, and I. V. Rakhshevskaya (Control Anal. Lab., Kiev). Aplichesk. Detal' 5, No. 2, 15-23 (1958).  
The  $n$  of a soln. is equal to the sum of the indexes of the ingredients and solvent. An increase in the amounts of the ingredients results in a corresponding increase of the indexes. The solubilities of various compounds in  $H_2O$  and EtOH were detd. with their indexes and increments/g. Four systems for analysis of 2 ingredients and solvent are described. (I)  $A$  and  $B$  are  $H_2O$ -sol. but only  $B$  is alc.-sol., (II)  $A$  and  $B$  are alc.-sol. and  $B$  is  $H_2O$ -sol., (III)  $A$  is sol. in alc., insol. in  $H_2O$ ,  $B$  is sol. in  $H_2O$ , insol. in alc., (IV)  $A$  and  $B$  are both sol. in alc., in which case  $B$  is detd. chemically. Technique: 0.2-0.06 g. is dissolved in 1 cc. of  $H_2O$ . In the case of systems II and III filtration must precede refractometric detn. The difference between the  $n$  of the  $H_2O$  and that of the soln. is equal to the sum of the index increments of both ingredients (I) or  $B$  only (II and III). Another small quantity is dissolved in 95% alc. (filtration in case of I and II). The difference between the  $n$  of the soln. and that of alc. is equal to the index increments of  $A$  and  $B$  (II and IV) or  $A$  (I and III). Three more systems are described when 3 ingredients are present: (V)  $A$  is detd. colorimetrically,  $B$  and  $C$  chemically, (VI)  $A$  is detd. colorimetrically,  $B$  chemically,  $C$  refractometrically, (VII)  $A$  is detd. refractometrically,  $B$  and  $C$  are chemically detd. Examples of the 3 systems are given, including aspirin, barbital, phenobarbital, aminopyrine, caffeine-Na benzoate, phenacetine. To det. phenacetine, 0.1-0.12 g. is dissolved in 5 cc. 95% alc., 0.5 cc. of the soln. mixed with 2 cc. of  $HNO_3$  (d. 1.2) and the mixt. dijd. after 10 min. to 50 cc. Ten cc. is exmd. colorimetrically against a standard of 0.01% of  $K_2CrO_4$  to which has been added 2 drops of methyl red per 50 cc. The standard is stable for 1 year when sterilized in 10-cc. ampuls. Antipyrine interferes with the detn. Limit of errors  $\pm 10\%$ . Antipyrine is best detd. by adding solid picric acid to a dil. soln. in  $CHCl_3$ . The

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3738. Use of refractometric and colorimetric methods for the analysis of compound pharmaceutical powders. L. I. Kapaport, F. D. Yaretskaya and I. V. Itakshevskaya. *Apteknaya Delo*, 1960, 5 (2): 18-23. Methods are described for the analysis of pharmaceutical powders containing two or three known ingredients. These are based on measurements of the refractive indices of aqueous and ethanolic extracts of the mixtures, supplemented, when necessary, by colorimetric or chemical procedures specific for one of the ingredients.

E. HAYES

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Material Standards in Iron Foundries. G. Rakovets  
(Kohdzaft Lopok, 1958, 8, Oct., Urkote, 214-216). A method  
is given for calculating the chemical composition of grey  
cast iron made from raw materials of standard composition.

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RAPAPORT, L.I.; YARETSKAYA, F.D.; RAKSHEVSKAYA, I.V.

Use of refractometric and colorimetric methods for the analysis  
of powdered drug mixtures. Apt.delo 5 no.2:15-23 Mr-Ap '56.

1. Iz TSentral'noy nauchno-issledovatel'skoy aptechnoy laboratorii  
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aptechnogo upravleniya.

(COLORIMETRY) (REFRACTOMETRY)  
(DRUGS--ADULTERATION AND ANALYSIS)

RAKHIN, R.F.

New Visean rugosa from the western slope of the Urals. Paleont. zhur. no.1:54-59 '65. (NIREA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii vedochnyy institut (VNIGRI).

ACCESSION NR: AP4029004

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AUTHOR: Spektor, E. N.; Rakhshtadt, A. G.; Gorelik, S. S.; Sagalova, T. D.

TITLE: The effect of annealing before recrystallization on the elastic properties and structure of cold rolled metals and alloys with face centered cube lattice

SOURCE: Fizika metallov i metallovedeniye, vol. 17, no. 3, 1964, 445-452

TOPIC TAGS: pre-crystallization annealing, elastic property, structure, cold rolled metal, cold rolled alloy, face centered cube, face centered cube lattice, copper, nickel, A7 bronze, L68 brass, Kh20N80 nichrom

ABSTRACT: An increase of the elasticity range, the microhardness, as well as a change in the anisotropy of the elasticity range, takes place during the pre-crystallization annealing process of pure metals and alloys with a face centered cube lattice (copper, nickel, A7 bronze, L68, Kh20N80). The width of the x-ray interference, the character of the grain and the electro-resistance changes thereby insignificantly; only a certain change in the intensity and scattering of grain maximums is observed. The authors assume that the main cause of an increase in the elasticity range is the redistribution of dislocations rather than by polygonization. A stronger effect in the case of alloys is obviously associated with the simultaneous

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